DOCUMENT RESUME

ED 235 262 UD 023 102

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TITLE The Effectiveness of Upward Bound in Preparing Disadvantaged Youth for Postsecondary Education.
INSTITUTION American Institutes for Research in the Behavioral Sciences, Palo Alto, Calif.
PUB DATE Apr 83
NOTE 35p.; Paper presented at the Annual Meeting of the American Educational Research Association (Montreal, Quebec, Canada, April 11-15, 1983).
PUB TYPE Statistical Data (110) -- Reports - Evaluative/Feasibility (142) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Aspiration; *College Bound Students; *College Preparation; *Disadvantaged Youth; Economically Disadvantaged; *Educational Assessment; Educational Counseling; High Schools; Homework; *Program Effectiveness; Program Evaluation; Student Attitudes; Youth Programs
IDENTIFIERS *High School and Beyond (NCES); *Upward Bound

ABSTRACT

The effectiveness of Upward Bound (UB), a federally funded program to assist high-ability disadvantaged youth in completing programs in higher education, is addressed in this study. The study sought to determine if participation in UB enhances high school performance and participation in postsecondary education, especially in comparison to non-UB peers. Data from "High School and Beyond," a longitudinal study of high school classes of 1980 and 1982, were used for preliminary assessment of UB. Data were also obtained from high school principals regarding the characteristics of their schools. Comparison samples of non-UB students were closely matched in terms of background characteristics (race, sex, SES status, family structure, and school quality). An examination of the data showed that (1) UB students are more likely to take college preparatory courses while in high school than their non-UB peers; (2) UB students have higher expectations and plan to attend college immediately after high school and are more likely to be disappointed if they don't than non-UB students; (3) while UB and non-UB students tend to be similar in their attitudes and motivation, the UB students appear to spend more time on their homework than their non-UB peers; and (4) UB students are more likely to be encouraged by their teachers and counselors to attend college than non-UB peers. Appended to the report are statistical tables from the "High School and Beyond" study. (AOS)

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THE EFFECTIVENESS OF UPWARD BOUND IN PREPARING DISADVANTAGED YOUTH FOR POSTSECONDARY EDUCATION

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Paper prepared for presentation at the American Educational Research Association annual meeting, Montreal, Quebec, Canada, April 11-15, 1983

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THE EFFECTIVENESS OF UPWARD BOUND IN PREPARING DISADVANTAGED YOUTH FOR POSTSECONDARY EDUCATION

Abstract

This paper summarizes the results of a recent investigation of the extent to which and the ways in which Upward Bound enhances the education and achievement of disadvantaged youth. The questions addressed are (1) how do Upward Bound participants perform, in terms of high school achievement and in terms of preparation for and participation in postsecondary education, and (2) do they perform better than their peers who do not participate in Upward Bound. Data from High School and Beyond, a longitudinal study of the high school classes of 1980 and 1982, were used to investigate these questions. Analysis samples consisted of all Upward Bound participants (446 seniors and 343 sophomores) and equivalent numbers of seniors and sophomores matched to the Upward Bound students in terms of Upward Bound eligibility criteria (i.e., family income, parental education) but who had not participated in Upward Bound. The two samples were compared in terms of their high school programs and performance, standardized test scores, participation in extracurricular activities, attitudes and motivation toward school, values, educational plans and aspirations, and activities planned following high school. Results indicated that Upward Bound students did not differ from their peers in terms of high school attitudes and performance, but that they did differ in terms of plans for postsecondary education. Upward Bound students were more likely to be taking college preparatory programs, more likely to be planning to attend and complete college, and more likely to have taken steps to apply to college.

THE EFFECTIVENESS OF UPWARD BOUND IN PREPARING DISADVANTAGED YOUTH POSTSECONDARY EDUCATION[1]

Upward Bound is one of several programs supported by the U.S. Government designed to assist disadvantaged youth with high potential to enter and complete programs of higher education.[2] In 1982 over 400 projects were being supported, serving approximately 2500 youth. This paper summarizes the results of a recent investigation of the extent to which and the ways in which Upward Bound is enhancing the education and achievement of these youth.

Background

Upward Bound was conceived in 1964 and implemented on a pilot project basis in school year 1965-66 as part of the broader national War on Poverty centered in the Office of Economic Opportunity (OEO). Its major goal was the extension of equal educational opportunity to low-income and minority populations who were severely underrepresented in higher education. Because completion of higher education was (and still is) widely regarded as a key enabler for fuller social and economic participation, Upward Bound became a popular OEO program, expanding quickly beyond its original 25 pilot projects to 218 sites in 1966-67. In 1968, under the amendments to the Higher Education Act, the program was transferred to the U.S. Office of Education (now the U.S. Department of Education), where it became a major component of a larger effort to enhance the educational attainment of disadvantaged youth.

Upward Bound funds projects that are intended to improve basic skills and heighten participants' motivations regarding postsecondary education. The overall goal is to prepare eligible students for admission to a postsecondary institution. Most projects are directed toward secondary school students and feature full-time summer and part-time academic year motivational activities and remedial instruction for high school youths. Activities may include academic instruion, counseling, tutoring, exposure to extracurricular activities, advice on high school course selection, assistance in completing admission forms, and exposure to career options. All full-time and some part-time participants receive stipends, and many participate in paid work experiences. UB veterans' projects are largely

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[1] This paper is based on a study of the Upward Bound program conducted for the Division of Performance Management Systems, Organizational Performance Service, U.S. Department of Education, Contract No. 300-80-0825, Task Order 12. For a complete report on that study, see Schubert, J. G., Putman, K. E., & Steel, L., Rapid Feedback Assessment of the Upward Bound Program, Final Report, Palo Alto, CA: American Institutes for Research, 1982.

[2] Other programs currently being supported are Talent Search, Special Services for Disadvantaged Students, and Educational Opportunity Centers. These programs are all administered by the Division of Student Services within the U.S. Department of Education.

aimed at recruiting veterans into postsecondary educational programs and providing them with remedial services to ensure their retention and graduation.

In the early 1970s a comprehensive assessment of Upward Bound was undertaken. Participants in 54 1973-74 Upward Bound projects were surveyed, along with samples of youth who were similar in terms of family background and academic ability but who were not participating in the program. Follow-up surveys of both the Upward Bound (UB) and comparison youth were conducted in 1976-77 and 1978-79. These surveys revealed no appreciable differences between the UB and comparison students in terms of high school performance and completion, but there were substantial differences in terms of their educational aspirations and expectations. Further, UB students were more likely than comparison students to go on to postsecondary education and, in particular, to attend a 4-year college. Once enrolled, however, there were no significant differences in either persistence or performance in postsecondary programs. Finally, UB students obtained more financial assistance (particularly scholarships and grants) for their postsecondary education than did comparison students, and they were more likely than comparison students to avail themselves of support services (e.g., tutoring, counseling) designed to enhance their performance and retention in postsecondary programs.

Thus, the Upward Bound program appeared to be successfully influencing the educational attainment of disadvantaged youth. However, the impact of the program was primarily attributable to the heightened motivation and aspirations of participants and to their increased participation in post-secondary programs, particularly 4-year colleges, to their increased financial aid, and to their increased use of available support services.

These conclusions were based on data regarding the activities, aspirations, and accomplishments of Upward Bound participants in the early 1970s, a time of relatively greater economic prosperity and opportunity. The study reported here sought to ascertain the extent to which the program is continuing to benefit youth in the 1980s.

Objectives

This study addresses the questions of the extent to which and the ways in which Upward Bound is enhancing youths' high school performance and their preparation for and participation in postsecondary education. The program is intended to assist disadvantaged youth with high potential who otherwise might not have completed high school or gone on to college. Thus, the key questions are (1) how do Upward Bound participants perform in these regards, and (2) do they perform better than their peers who do not participate in Upward Bound? In this study, the questions are addressed with respect to the secondary school experience.

Data available from the Upward Bound projects are of limited use in assessing program performance. Not only are there variations across projects in the type and extent of data available, but comparable data for non-Upward Bound students are generally not available. Thus, it is not possible with these data to generate estimates of program effects or to assess the extent to which Upward Bound students perform differently or better than non-Upward Bound students.

To obtain a preliminary assessment of the Upward Bound program, then, we utilized data from High School and Beyond, a longitudinal study of the high school classes of 1980 and 1982 sponsored by the National Center for Education Statistics. The base year survey was conducted in 1980, when the participants were seniors and sophomores, respectively. Participants completed a battery of ability and achievement tests, as well as an extensive questionnaire covering such topics as family background, high school courses and grades, school and out-of-school activities, attitudes, and post-high school plans and aspirations. Data were also obtained from the school principals regarding the characteristics of the school (e.g., enrollment, staffing, budget, curriculum, etc.). Among the many questions asked of the students was whether the individual had been a participant in any of several special programs in high school, including Upward Bound. Because of this, it was possible to identify which students had been in Upward Bound, and to compare their activities, attitudes, performance, and plans with those of students who had not participated in Upward Bound.[1]

At the time of our study, only data from the 1980 base-year survey were available. It was not possible to determine the extent to which participants went on to or completed postsecondary education programs.[2] However, extensive data were available regarding the participants' high school programs and performance, their attitudes and motivation regarding school, and their plans and aspirations regarding college. These data provided the basis for a preliminary assessment of the performance of the Upward Bound program. Analyses of the High School and Beyond data were directed toward answering the following specific questions.

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[1] Two caveats should be noted: because of the way the response option on the questionnaire was phrased ("I have participated in this program"), individuals who at one time participated in Upward Bound but were not then actively involved in the program would be included in the group identified as Upward Bound participants. The second caveat is that we do not know the length of time a young person participated in Upward Bound. As a result, the analyses reported here may somewhat underestimate differences between UB and non-UB students.

[2] A follow-up survey of the participants was conducted in the Spring of 1982, at which time the sophomore cohort would have been seniors in high school and the senior cohort would have been two years out of high school. Data from this survey should be released early in 1983, and will provide a basis for assessing participants' actual post-high school activities and accomplishments. Chapter IV of this report suggests analyses that could be performed with the follow-up data.

1. What are the characteristics of the Upward Bound population? To what extent do Upward Bound (UB) students come from low-income and/or first generation college backgrounds?

2. To what extent and how do UB and similar non-UB students differ in terms of their high school programs and activities?

3. How do UB and similar non-UB students compare in terms of their academic achievement during high school?

4. How do UB and similar non-UB students compare in terms of their attitudes and motivation regarding school? How do they compare in terms of their levels of self-esteem and other values?

5. To what extent and how do UB and similar non-UB students differ in terms of their post-high school educational (and career) plans and aspirations?

In the remainder of this chapter we describe in greater detail the samples and data used to investigate these questions, the procedures followed, and the results obtained.

Data Source

The High School and Beyond Samples. Approximately 28,000 seniors and 30,000 sophomores were selected in 1980 to participate in High School and Beyond. A two-stage probability sampling design was employed to ensure that the participants in the study were representative of the populations of tenth and twelfth graders in the United States at that time. Under this design, 1,122 high schools were selected from the 26,095 schools that contained either grade 10, grade 12, or both. Schools were selected with probability proportional to estimated enrollment, with the exception of alternative and private schools and schools with high proportions of Hispanic students, which were oversampled. From each of these schools, 36 seniors and 36 sophomores were randomly selected. (In those schools with fewer than 36 seniors or sophomores, all eligible students were drawn in the sample.)[3]

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[3] This sampling procedure resulted in a sample that, with the exception of the oversampled strata, was approximately self-weighting. Of the schools selected for the sample, 1,015, or 90.5%, agreed to participate. Of the 69,662 students invited to participate, tests and questionnaires were completed by 58,270, or 84%. To correct for possible biases introduced by the oversampling of schools in some strata and by the non-participation of some schools and some students, both school and individual case weights have been developed. These weights give each school or each student a weight equal to the number of schools or students in the universe of schools or students which the school or student represents. Use of these weights is intended to result in correct estimates (within sampling error) of the population of tenth and twelfth graders in the United States in the Spring of 1980, and correct estimates of subgroups within it.

The analysis samples. As noted previously, the High School and Beyond questionnaire included an item regarding participation in Upward Bound. A total of 446 of the seniors and 343 of the sophomores indicated that they had been Upward Bound participants. All of these individuals were selected to comprise the Upward Bound analyses samples. For comparison purposes, we selected equivalent numbers of sophomores and seniors who indicated that they had not participated in Upward Bound. These comparison samples were closely matched to the UB samples in terms of the Upward Bound eligibility criteria (i.e., family income, parental education) and in terms of other background characteristics that might possibly also influence the outcomes of interest (i.e., race, sex, school quality, family structure).[4] As a result, the comparison samples are not representative of all non-UB students, but rather of the sub-groups of students similar to Upward Bound participants, but not in the program. By selecting the comparison samples to be as similar as possible to the UB students in terms of their "pre-program" characteristics, we enhance the likelihood that differences observed may be attributable to the Upward Bound program.

Variables examined. The wealth of information available in the High School and Beyond data base permits a number of variables to be analyzed for each of the research questions being investigated. These variables are listed in Table III-1. Most variables were available for both the sophomores and seniors; a few, however, were only available for one or the other cohort.

Analysis and Findings

In the analyses, we attempted to document the characteristics of the Upward Bound participants (research question 1) and assess the extent to which and the ways in which they differed from similar non-UB students on the outcomes of interest to the DSS (research questions 2-5). To answer the first question we compared UB students to high school students in general (based on published statistics for the High School and Beyond samples as a whole). In the subsequent analyses, we compared statistics for UB and

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[4] The variables used in matching the UB and comparison (NUB) samples were defined as follows: SES--top quartile, middle two quartiles, lowest quartile; race--black, white, other; sex--male, female; family structure--lives with both parents, lives with parent and stepparent, lives with only one parent; school quality (a composite measure derived through factor analysis from school enrollment, per pupil expenditures, percent of students dropping out, and percent of students going on to college)--high, medium, or low. SES was used as a matching variable because it reflects both parental education and family income; as these two latter variables are highly correlated, they could not both be used in the matching process. The SES measure used was a composite variable constructed from items measuring father's occupation, father's and mother's education, family income, and possessions in the home such as daily newspaper, encyclopedia, typewriter, dishwasher, two or more cars, etc.

Table III-1

Variables Used in Assessing Upward Bound Program Performance

Characteristics of UB Participants

Race; Sex; Census region; SES; Family income; Mother's education; Father's education

Aspects of High School Program

Type of program; Semesters completed of English/literature, math, history/social studies, science; Advanced courses taken (Algebra I, Algebra II, Geometry, Trigonometry, Calculus, Physics, Chemistry, AP English, AP Math); Special programs participated in (co-op education, work-study, Talent Search, continuation or alternative high school, CETA, JROTC, program for pregnant girls); Semesters planned of English/literature, math, history, social studies, science (sophomores only)

Extracurricular Activities

School activities participated in; Employment experience (currently employed, ever worked, hours worked); Cultural experiences

Academic Abilities (standardized tests)

Reading; Math

High School Performance

Typical grades in high school; Grades in English, math; Factors interfering with high school education (seniors only); Expect to graduate from high school

Attitudes/Motivation Toward School

Attitudes toward school in general (likes working hard in school, satisfied with education, interested in school, thinks well of students getting good grades); Attitudes toward English, math classes (useful, interesting, at ease in class, tense doing assignments, class doesn't scare, dreads class); School-related behavior (disciplinary problems, suspension, cutting class, absence when not ill, tardiness, time spent on homework, forgets pencil/paper, books, forgets homework)

Values

Self-esteem; Work orientation; Important aspects of life quality; Important aspects of jobs

Educational Plans and Aspirations

Highest level of education expected; Least education satisfied with; Plans regarding college (ever attend, attend next year, applied to 1+ colleges, accepted by 1+ colleges, expect to complete college, disappointed if don't complete college, believes has ability to complete college, knows how to choose high school program for college, knows how to apply to college); Retrospective reports of plans to attend college (plans in grades 6-11); Plans for obtaining financial aid; Expected sources of financial aid; Expected college major

Post-High School Plans and Aspirations

Main activity planned for year following high school (work full time, work part time, OJT/apprenticeship, military, homemaker full time, vocational/technical school, 2-year college, 4-year college); Other activities planned for year following high school; Occupational aspiration for age 30

Others' Influence on Post-High School Plans

Others' encouragement to attend college (father, mother, counselor, teachers, friends/relatives); Others consulted in planning high school program; Others influencing post-high school plans; Characteristics of closest friend; Parents' interest in school work

similar non-UB students, using the analysis samples described above. The significance of the differences observed was assessed via chi square (for categorical variables) or t-tests (for metric variables). We noted differences proving statistically significant at or above the 95% confidence level.

We conducted a series of preliminary analyses to assess the need for using case weights in the study. With cluster samples such as the High School and Beyond, observations are not truly independent and case weights thus vary. Attempts to correct for sampling and design effects usually result in reducing the "effective" sample size upon which estimates of standard errors are based. "Effective" sample size refers to the number of self-weighted cases that would be required to produce estimates of comparable reliability. This in turn results in larger confidence intervals, thus attenuating the stability of the estimates obtained. We therefore computed descriptive statistics (i.e., frequencies, means, standard deviations) for selected background and outcome variables, using both weighted and unweighted data.[5] Comparisons of the results revealed that omitting the case weights did not introduce appreciable bias in the results obtained: with few exceptions the differences were less than two percentage points for frequencies, or less than .1 of a standard deviation for means. We therefore decided to maximize the stability of the estimates obtained and use unweighted data in the analyses.

The findings for each of the five research questions are summarized below. Tables showing the results for all variables examined are presented in Appendix A.

1. What are the characteristics of the Upward Bound population? To what extent do Upward Bound (UB) students come from low-income and/or first generation college backgrounds?

Figure III-1 presents data on the demographic characteristics of UB students and of high school students in general (see also Table 1 in Appendix A). Upward Bound appears to draw more heavily from non-white students and, to a lesser extent, from males; both whites and, among the tenth graders, females are underrepresented relative to the population of high school students in general. There also appears to be a greater concentration of UB students in the south and somewhat fewer in the midwestern portions of the U.S.

Data regarding the economic backgrounds of UB students are shown in Figure III-2 (also Table 1, Appendix A). As expected, students from the lower socioeconomic and income levels tend to be overrepresented among the

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[5] The variables examined include family income, father's education, mother's education, race, census region, family structure, family size, high school program, math grades, English grades, plans for college, planned post-high school activity, interest in school, occupational aspiration, school attendance, number of colleges applied to, reading and math test scores, self-concept, and locus of control.

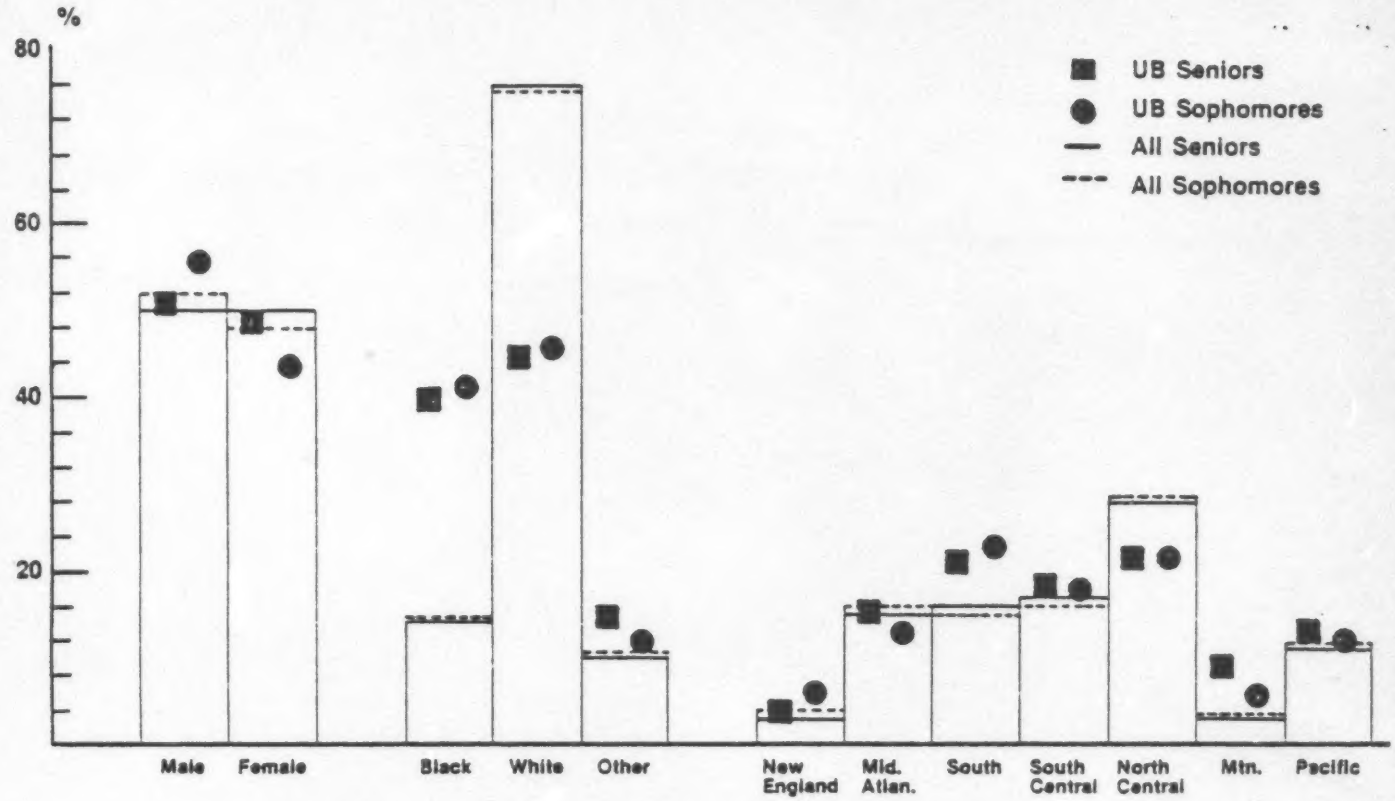

Figure III-1 Demographic Characteristics of UB Participants

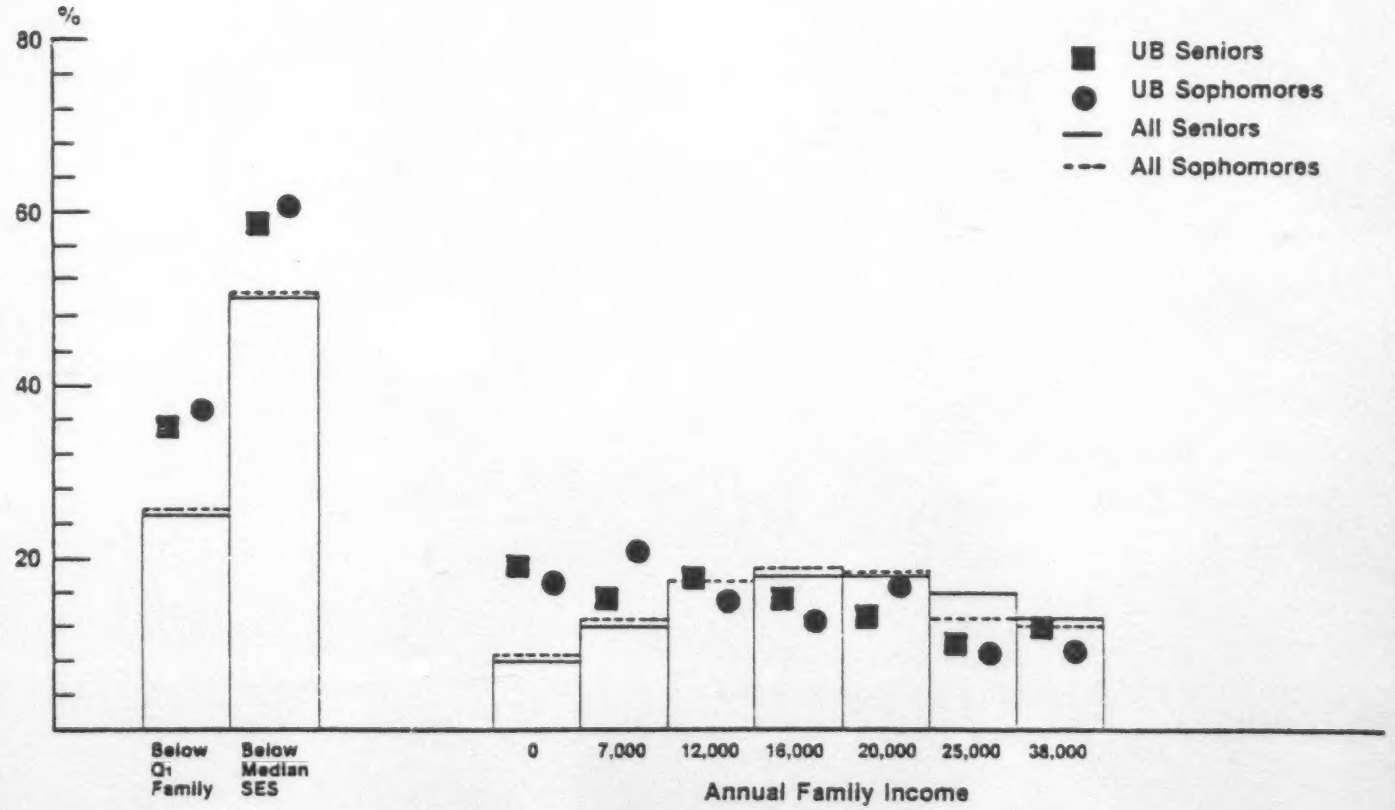

Figure III-2 Socioeconomic Background of UB Students

UB students in both grade cohorts. Approximately three-fifths of both the senior and sophomore cohorts had SES scores that were below the median for the sample as a whole, and nearly two-fifths were in the lowest SES quartile. Similarly, the mean SES scores for the UB students (-.27 for the seniors, -.30 for the sophomores) were considerably lower than the mean scores for the samples as a whole (-.09 and 0.05 respectively); the differences ranged from .23 S.D. for the seniors to .33 S.D. for the sophomores.

Over half the UB sample members reported family incomes below the median for the nation as a whole.[6] However, students were only asked to report family income in terms of ranges. As a result, it was not possible to determine with any precision the proportion of UB students whose family incomes fell at or below the poverty level at the time of the survey, much less when they joined Upward Bound. However, based on the frequencies observed for the various income ranges (and taking family size and structure into account), we estimate that over a third of the UB samples came from families with incomes at or below the poverty level at the time this survey was conducted. (At the time the survey was conducted, the poverty level for a family of four was defined as $6,660).

Figure III-3 presents information on the levels of education attained by the UB students' mothers and fathers (see also Table 1, Appendix A). UB students appear more likely to have parents who did not graduate from high school than do students in general, and they are somewhat less likely to have parents who have obtained college or graduate degrees. Indeed, when father's and mother's education are considered together, 65% of the UB seniors come from families where neither parent graduated from college, and 32% come from families where neither parent attended any college. Among the UB sophomores, the corresponding figures are 73% and 40%.

It thus appears that low SES individuals, minority students, and potential first-generation college students comprised a large segment of the UB population in 1980. However, at that time Upward Bound did not appear to be drawing primarily from the segment of the population with incomes below the poverty level.

2. To what extent and how do UB and similar non-UB students differ in terms of their high school programs and activities?

The proportions of UB and similar non-UB seniors and sophomores taking or planning college-preparatory courses during high school are shown in Figures III-4a and III-4b (see also Table 2, Appendix A). UB seniors were nearly twice as likely as non-UB seniors to have taken 3 or more years of math, history, and science, and they were half again as likely to have taken

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[6] Questions arise about students' ability to report family income accurately. Interpretations based on these data should be made cautiously.

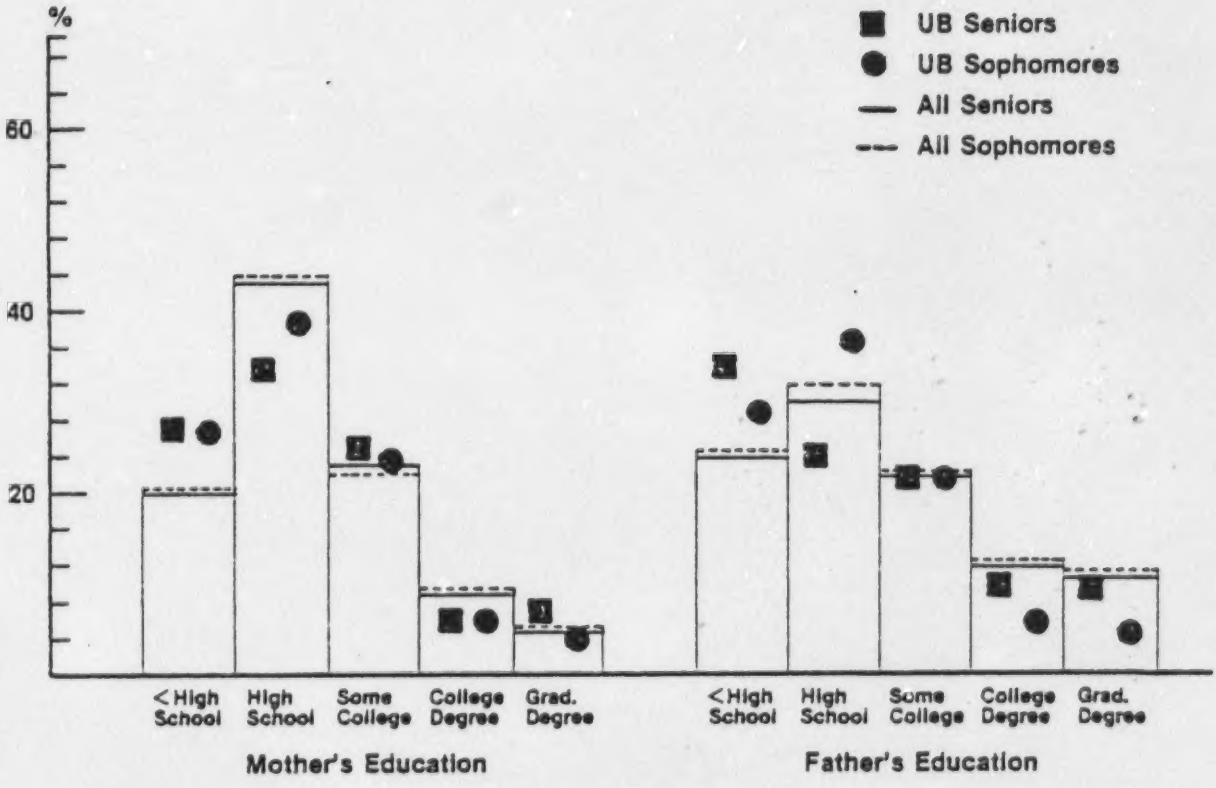

Figure III-3 Parental Education of UB Students

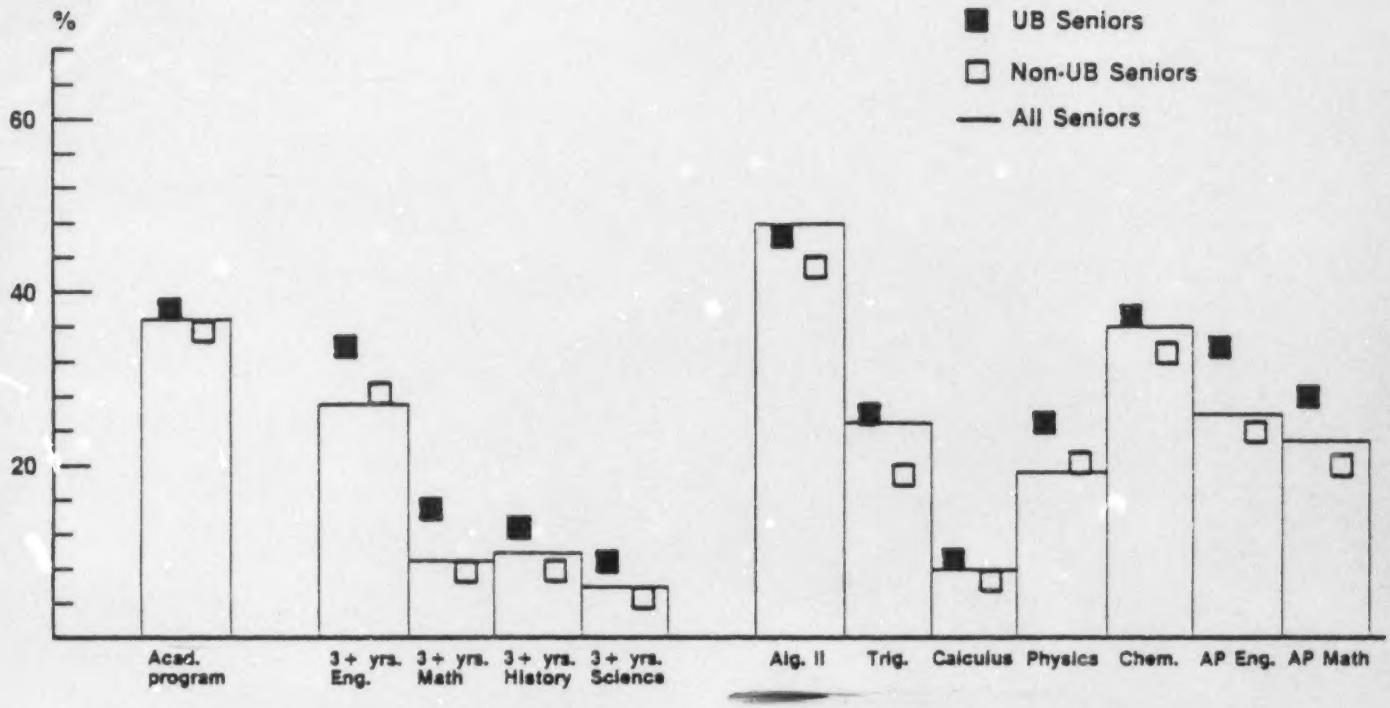

Figure III-4a College Preparatory Courses taken by UB and non-UB Seniors

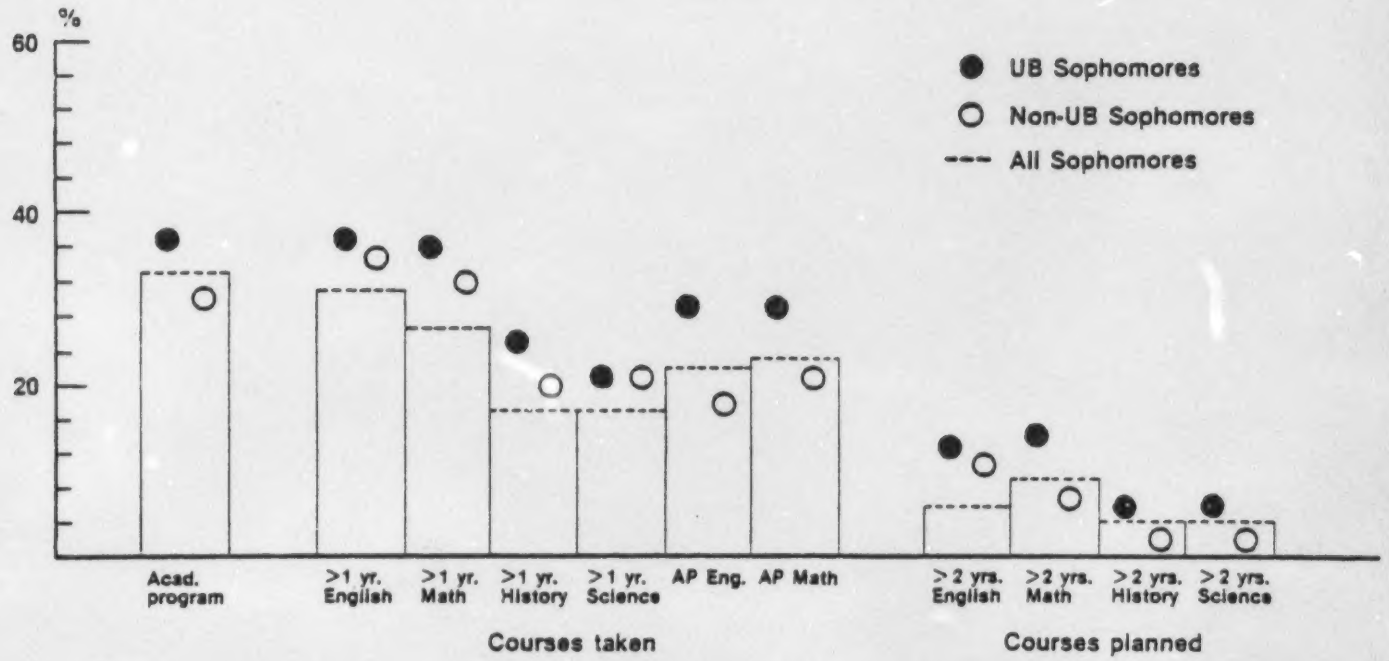

Figure III-4b College Preparatory Courses taken and planned by UB and non-UB sophomores

trigonometry. UB seniors were also more likely to have taken 3+ years of English, but the difference was not statistically significant. Among the sophomores, UB students were more likely planning to take more than two years of English, science, history, and especially math; at that point in the educational career, however, no differences were apparent in number of courses already taken. For both grade cohorts, UB students were considerably more likely to report having been in advanced placement English and math classes.

In addition to inquiring about students' involvement in Upward Bound, the High School and Beyond questionnaires also asked about participation in several other special programs, including co-op education, work-study, Talent Search, continuation or alternative high schools, CETA, and JROTC.[7] In all cases, UB students were much more likely to report having participated in one or more of those programs than were non-UB students; participation was indicated, on the average, by 33% of the UB seniors and 21% of the UB sophomores, as contrasted to 7% of the non-UB seniors and 4% of the non-UB sophomores. Interestingly, UB seniors were also more likely to report participating in extracurricular school activities than were non-UB seniors (see Table 3 in Appendix E). Some differences were also observed among the sophomores, but not to as great an extent. No significant differences were observed between UB and similar non-UB students with regard to employment experiences or, among the tenth graders, cultural experiences.

In summary, it appears that UB students are likely to take more college preparatory courses while in high school than their non-UB peers. The higher proportions of UB students participating in advanced placement classes is interesting, but it is not clear the extent to which this reflects selection factors (i.e., selecting participants with demonstrated academic potential) versus program effects. Similarly, the very high proportion of UB students who also participate in one or more other special programs may be indicative of some selection bias, such that many of the special programs are reaching the same subset of students. The number of other special programs that UB students participate in also raises the issue of attribution: where improved performance is noted, one cannot tell which "treatment" or combination of treatments produced the effect.

3. How do UB and similar non-UB students compare in terms of their academic achievement during high school?

We examined two indicators of academic achievement: students' scores on standardized tests, and students' reported grades during high school. With regard to the standardized tests, no significant differences were found between UB and similar non-UB students on either reading or math tests (see Table 4, Appendix E).[8] Similarly, UB and non-UB students did not differ

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[7] As with Upward Bound participation, the students were asked if they had ever participated in these programs. Thus, it should not be concluded that the UB students were necessarily participating in these other programs concurrently with Upward Bound.

[8] When only low SES students were examined, UB students performed better than non-UB students; the difference in math was statistically significant.

substantially in terms of their typical high school grades although UB students were more likely to report earning Bs and less likely to report earning Ds and Fs (see Table 5, Appendix E). However, when asked about grades in English and math, more of the UB seniors reported earning mostly As or Bs than did the non-UB saniors (46% vs. 41% for English, 42% vs. 35% for math). With regard to the math grades, the difference was statistically significant ($p \leq .05$).

In addition to examining test scores and grades, we also looked at the extent to which UB and non-UB students expected to complete high school and, for the seniors, factors reported to be interfering with their high school education. UB and non-UB students did not differ substantially in terms of their expectations for completing high school. There were some slight differences in their perceptions of factors that were interfering with their education. UB students were somewhat less likely to feel that their courses were too hard, and more likely to feel that they were too easy; they were also more likely to point to poor teaching as a problem, and less likely to cite difficulties in adjusting to school. However, none of these differences reached statistical significance.

Few differences seem to exist between UB and non-UB students in terms of high school performance. However, the UB students were more likely to have taken advanced courses to prepare for college. Thus, while there were not significant differences in their grade averages, many of the UB students were earning those grades in more difficult courses.

4. How do UB and similar non-UB students compare in terms of their attitudes and motivation regarding school? How do they compare in terms of their levels of self esteem and other values?

We examined several indicators of attitudes and motivation toward school, including both expressed attitudes and behavioral indices (see Table 6, Appendix E). Few differences were found between UB and similar non-UB students in their expressed attitudes toward school, with the exception that UB students were more likely to indicate that they liked working hard in school; among the seniors the difference (68% vs. 60%) was statistically significant ($p \leq .05$). There were also few differences in the behavioral indices of attitude/motivation examined, except with regard to homework. Among both the twelfth and tenth graders, UB students were significantly more likely to report spending five or more hours a week on their homework than were similar non-UB students ($p \leq .05$).

We also examined students' scores on two measures of self esteem and a work orientation scale, as well as their ratings of the importance of several dimensions of life quality and job satisfaction (see Tables 7 and 8 in Appendix E). UB and non-UB students did not differ appreciably in terms of either self esteem or work orientation, and only a few differences in other values were noted. UB seniors were more likely to rate being a leader in the community as important, while UB sophomores were less likely to place a high value on having strong friendships.

UB and non-UB students would thus appear to be quite similar in terms of their attitudes and motivation toward school, their attitudes toward themselves, and their values regarding work and other aspects of life quality. The one area in which they seem to differ concerns their willingness to "invest" in their education; UB students both indicated they were more willing to work hard in school and reported spending more time on their homework.

5. To what extent and how do UB and similar non-UB students differ in terms of their post-high school educational (and career) plans and aspirations?

Data regarding the educational expectations of UB and similar non-UB students appear in Figures III-5a and III-5b (see also Table 9 in Appendix E). Among both the tenth and twelfth graders, UB students have higher expectations for obtaining a college or graduate degree than non-UB students. Differences were most pronounced, and statistically significant, among the seniors.

Figures III-6a and III-6b present further information regarding these youths' plans for college. Differences between the UB and non-UB students are even more pronounced here, with UB students more likely to expect to attend college sometime, more likely to expect to attend college immediately after high school, more likely to expect to graduate from college, and more likely to be disappointed if they don't. Differences on the first and third of these measures were statistically significant for both grade cohorts, and differences on the second and last measures were significant for the senior cohort. Among the seniors, UB students were also more likely to have applied to one or more colleges by the spring of their senior year; they were slightly more likely to have already been accepted by a college, but this difference was not statistically significant. (Given that the survey was conducted between 1 February and 15 May 1980, many students were likely not to have heard the decisions on their college applications; thus, it is premature to conclude that there were in fact no differences between the UB and non-UB students in this regard.) Among the sophomores, UB students were more likely to believe that they knew how to choose a high school program that would prepare them for college than were non-UB students.

Figure III-7 provides a retrospective on plans to attend college. UB students in both cohorts were more likely than their non-UB peers to report that they planned to attend college for each of the time points examined; among the seniors the differences were consistently significant. The proportions of students indicating plans to attend college tended to increase over time for both the UB and the non-UB students; however, the biggest increase occurred between ninth and tenth grade for the UB seniors, the point at which they were most likely to have entered the program. At that point, the UB seniors' college expectations appear to have surpassed those of high school students in general, as well as those of their non-UB peers.

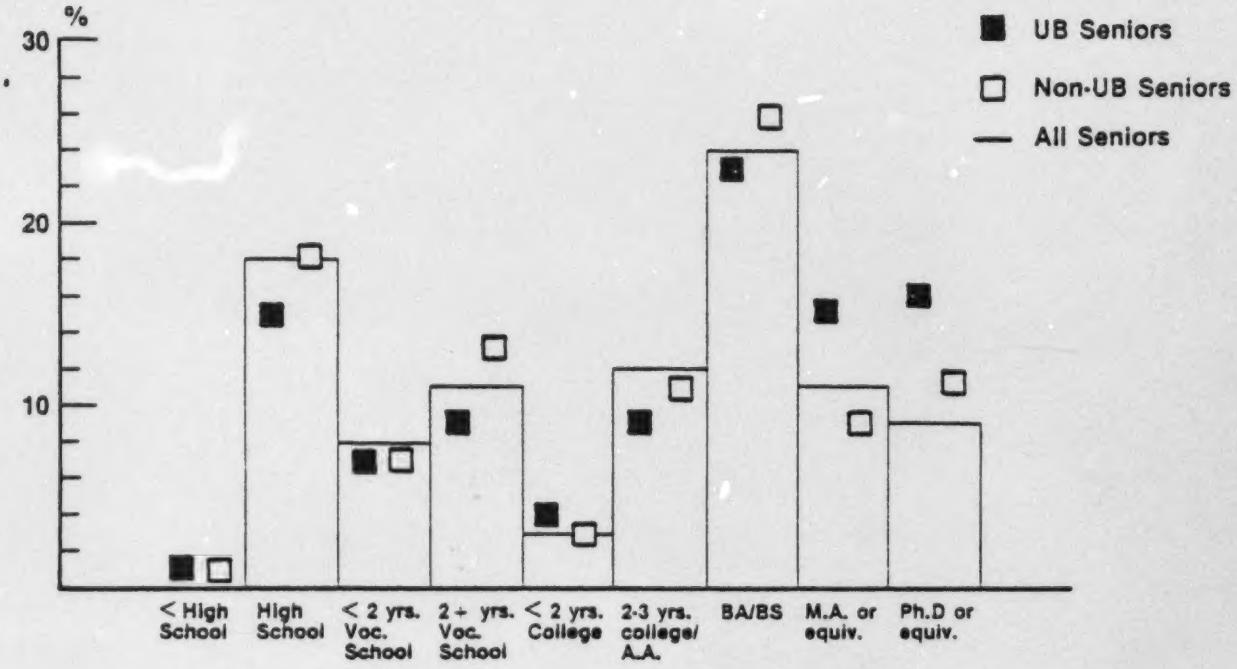


Figure III-5a Expected Levels of Education of UB and Non-UB Seniors

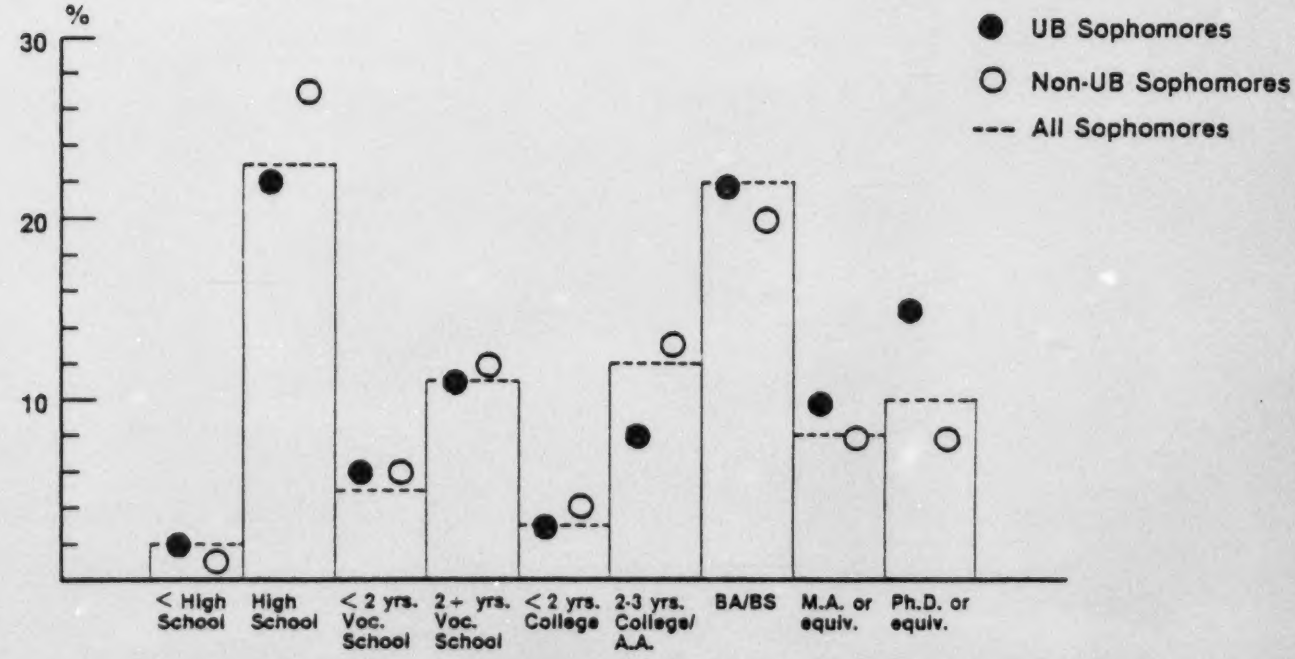


Figure III-5b Expected Levels of Education of UB and Non-UB Sophomores

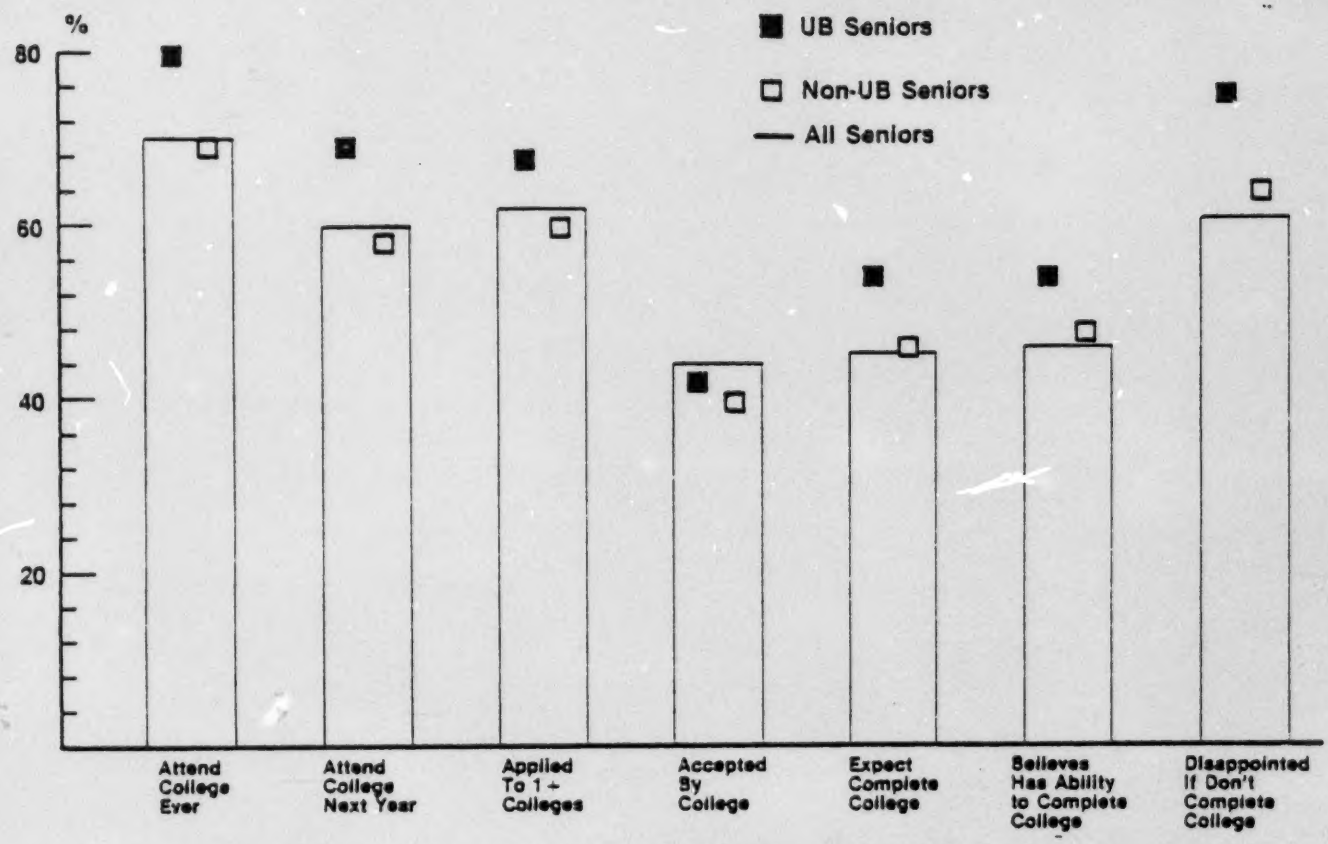


Figure III-6a College Plans of UB and Non-UB Seniors

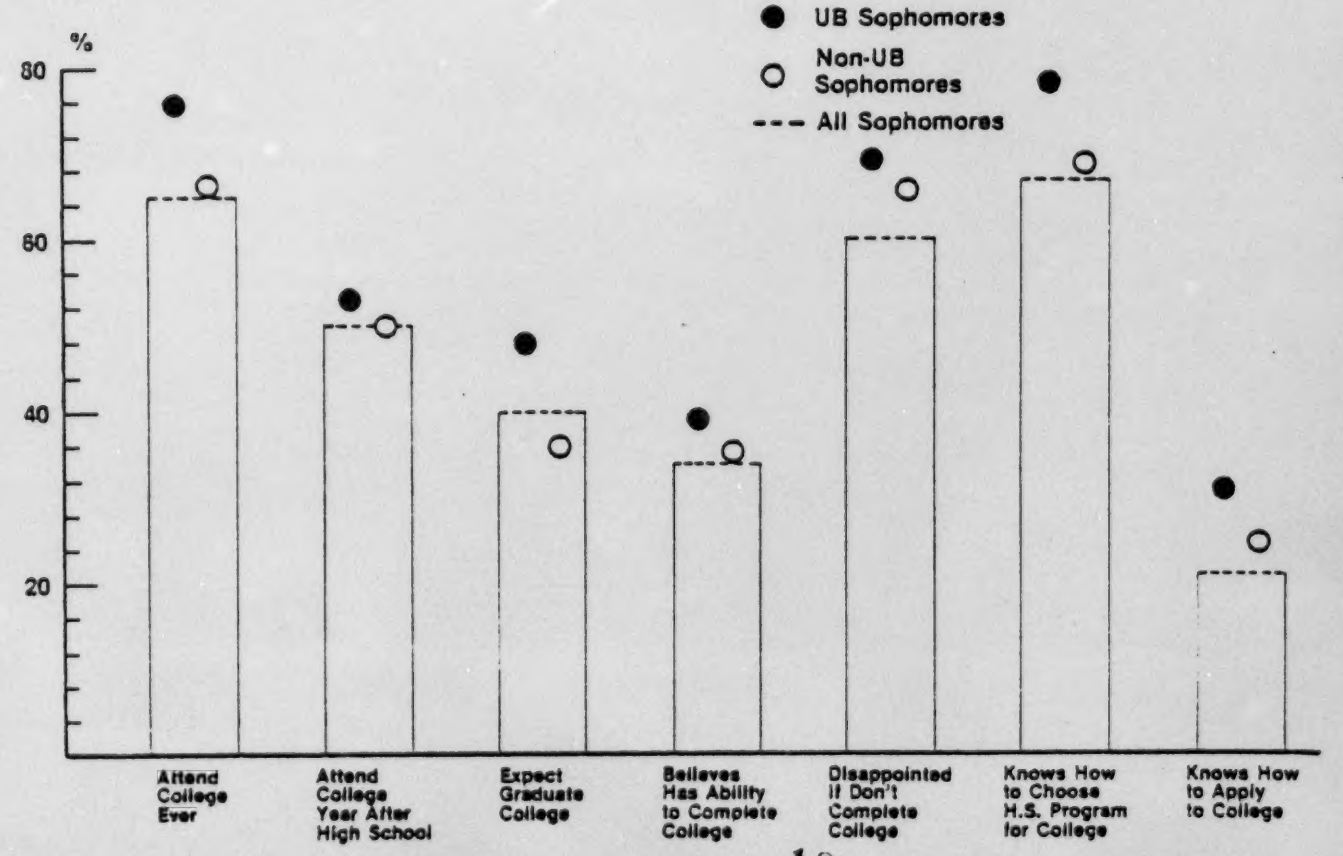


Figure III-6b College Plans of UB and Non-UB Sophomores

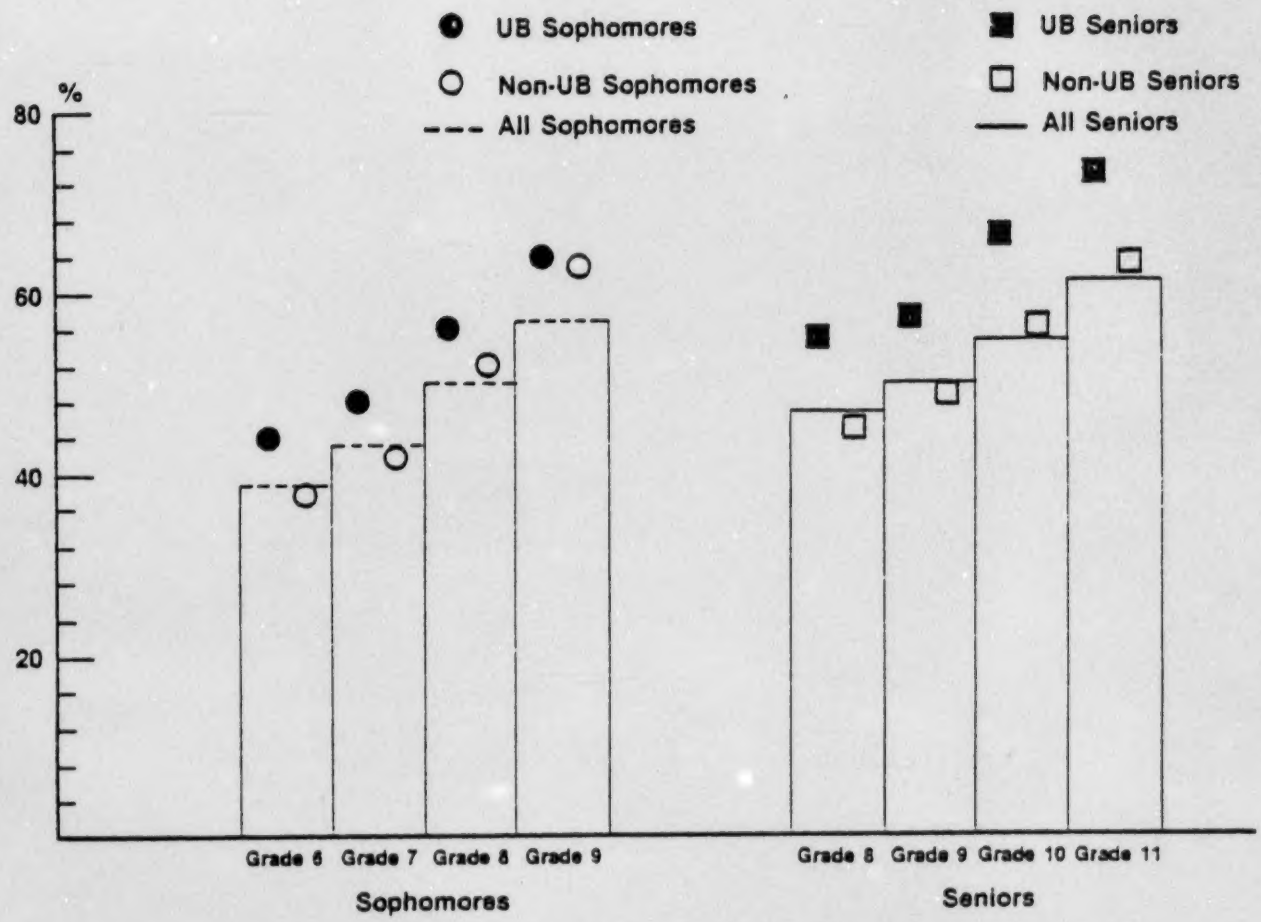


Figure III-7 Proportions of UB and Non-UB Sophomores Who in Grades 6 - 11 Planned to Go to College

Data regarding the twelfth graders' plans for obtaining financial aid for postsecondary school are presented in Figure III-8. UB students were significantly more likely than were non-UB students to have planned to get financial assistance through loans, scholarships or grants, or work study programs. In particular, they were more likely to cite the following as expected sources of financial aid: the NDSL program, the FGSL program, state and college student loan programs, BEOG/SEOG, and nursing scholarship programs.

Figure III-9 presents information on the main activity planned by UB and non-UB students for the year following graduation from high school. As can be seen, UB students in both cohorts are more likely than their non-UB peers to plan to attend college following high school, and UB seniors are less likely to plan to work full time. Only among the sophomores, however, were the differences statistically significant.

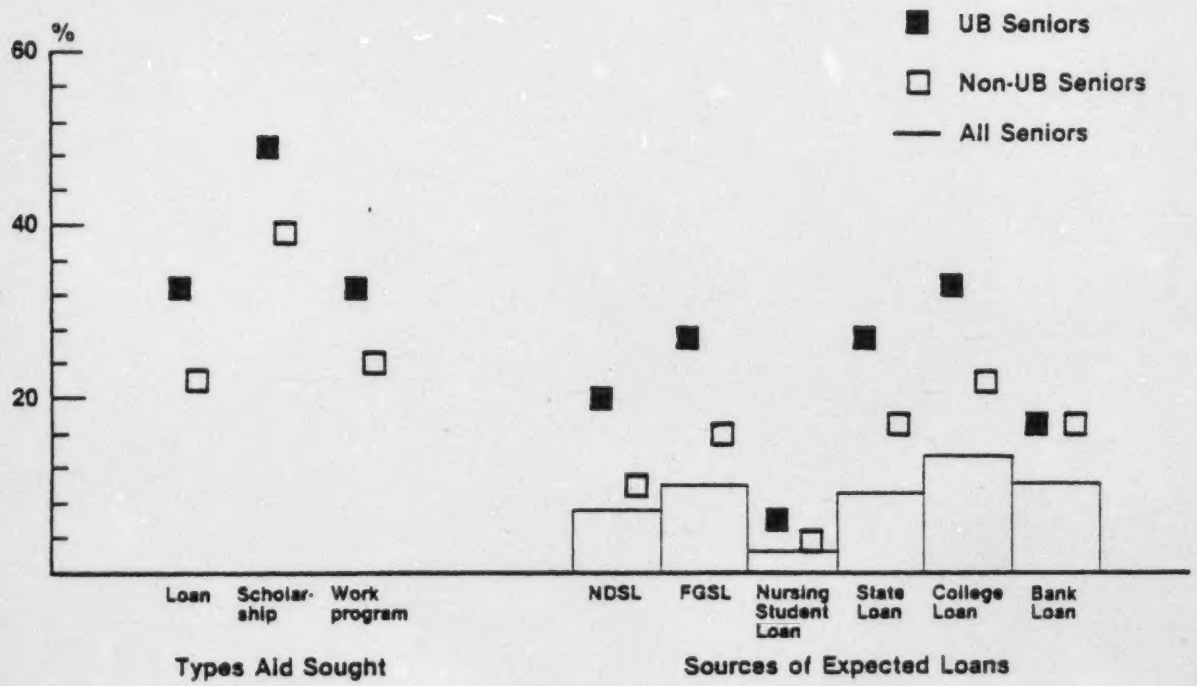
We also examined data regarding these individuals' planned college majors and occupational aspirations (see Tables 9 and 10 in Appendix E). However, only slight differences were observed between the groups of interest.

Finally, we examined the extent to which "significant others" influenced these youth regarding their educational and post-high school plans. UB students were more likely than non-UB students to report that their counselors and teachers encouraged them to attend college, and that they consulted their counselors and teachers in planning their high school program.

The information presented here suggests that UB students are considerably more oriented toward attending college and obtaining a college degree than are non-UB students. UB students are more likely to express the intention to go to college, to have taken concrete steps to attend college, and to have plans regarding financial aid. They also appear to be working more closely with their counselors and teachers in formulating educational plans than are non-UB students.

Conclusions

The data presented here suggest that the Upward Bound program continues to enhance youths' preparation for postsecondary education and, presumably, the likelihood that they will enter and complete a postsecondary program. We found UB students more likely to be taking college preparatory courses in high school, more likely to be planning to attend and complete college, and more likely to have formed concrete plans for attending college. Consistent with the results of the previous study, differences in actual performance during high school and in attitudes and motivation toward school were not as pronounced, although UB students appeared to be more willing to invest in their education than did non-UB students. In general, differences appeared to be greater among the twelfth graders than among the tenth graders; this is not surprising, however, as the twelfth graders, for the most part, will have been in the program for a longer period of time.



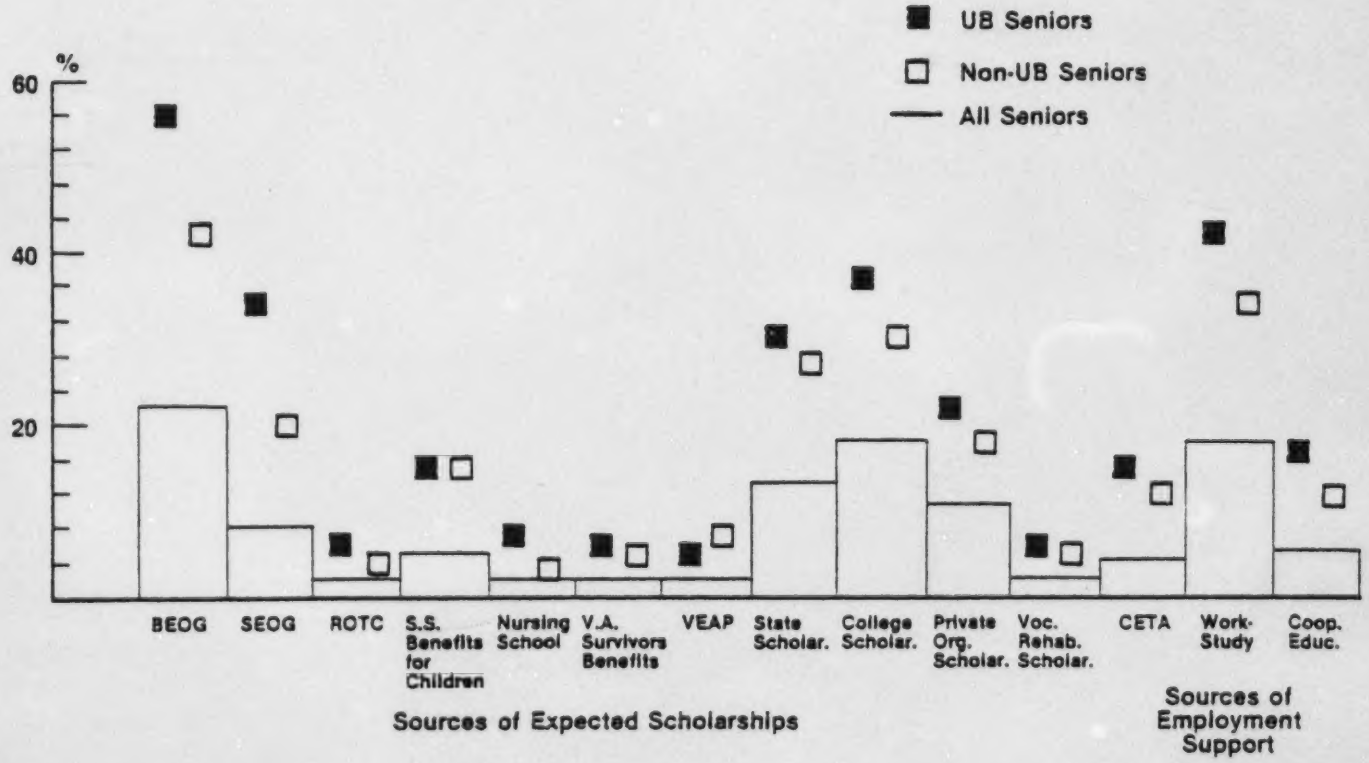


Figure III-8 Expected Sources of Financial Aid for UB and Non-UB Seniors Planning College

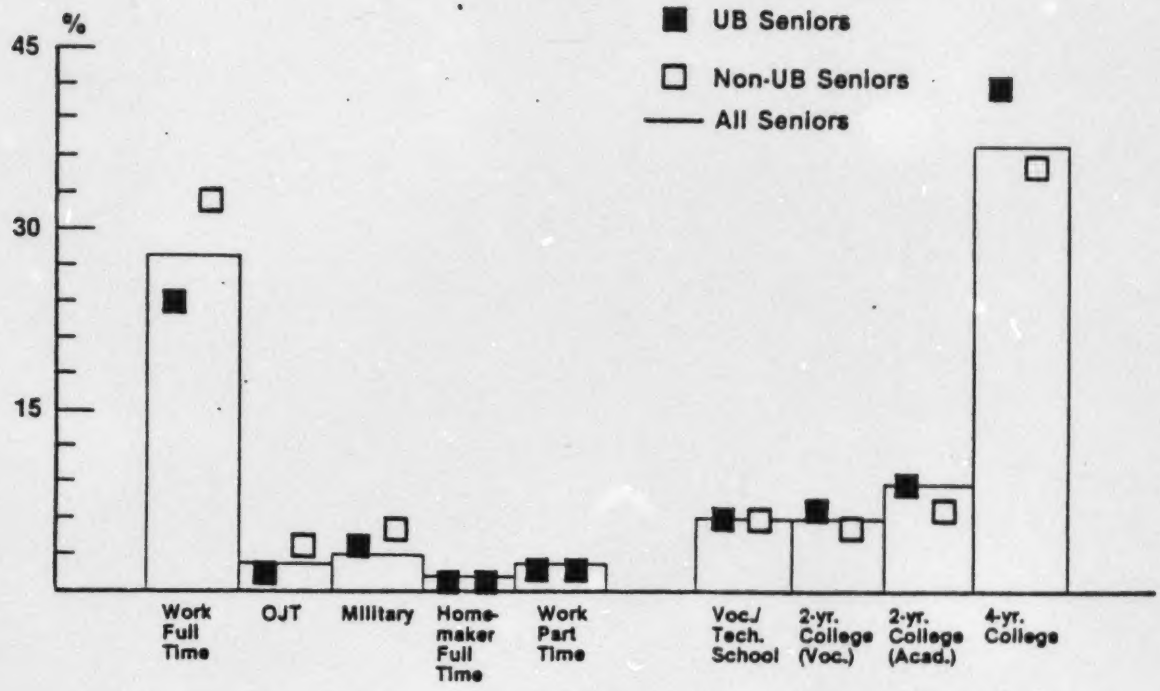


Figure III-9a Main Activity Planned by UB and Non-UB Seniors for Year Following High School

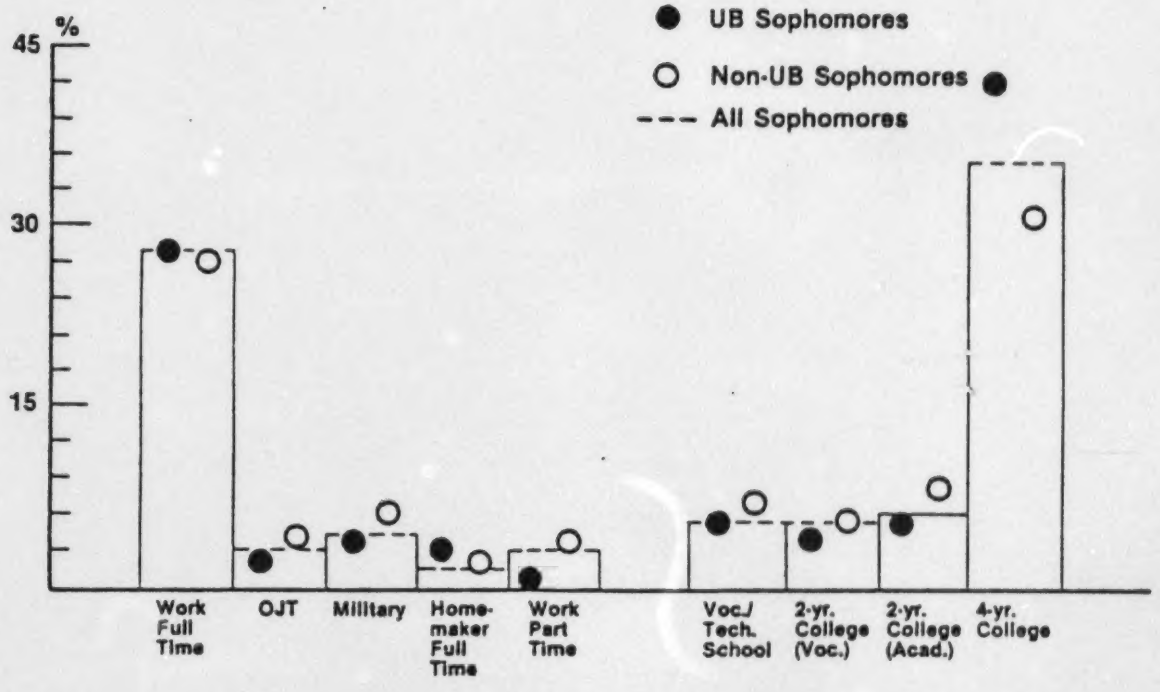


Figure III-9b Main Activities Planned by UB and Non-UB Sophomores for Year Following High School

The study, of course, could only examine characteristics of UB participants prior to graduation from high school. Thus, questions regarding these youths' subsequent enrollment, rentetion, and performance in postsecondary programs remain unanswered. Data from the High School and Beyond First Follow-up Survey will be examined, when available, to determine whether the differences noted here between UB and non-UB students during high school do in fact presage differences in postsecondary educational participation and attainment.

Appendix A: Tables from High School and Beyond Study

Table A-1

Characteristics of Upward Bound Participants
Relative to High School Students in General

	12th Grade		10th Grade	
	UB	All HS	UB	All HS
Race				
Black	40%	14%	41%	14%
White	45%	76%	46%	75%
Other	15%	10%	12%	11%
Sex				
Male	51%	50%	56%	52%
Female	49%	50%	44%	48%
Census Region				
New England	4%	5%	6%	5%
Mid-Atlantic	15%	15%	13%	16%
South Atlantic	21%	16%	23%	15%
East South Central	7%	6%	6%	5%
West South Central	11%	11%	12%	11%
East North Central	16%	20%	16%	20%
West North Central	5%	8%	6%	8%
Mountain	9%	5%	6%	5%
Pacific	13%	13%	12%	13%
SES				
Percent Below 1st Quartile	35%	25%	37%	25%
Percent Below Median	59%	50%	61%	50%
Percent Below 3rd Quartile	80%	75%	83%	75%
Family Income (7ths)				
≤$6,999	19%	8%	17%	8%
$7-11,999	15%	12%	21%	13%
$12-15,999	17%	16%	15%	17%
$16-19,999	15%	18%	13%	19%
$20-24,999	13%	18%	17%	18%
$25-37,999	10%	16%	9%	13%
$38,000 up	12%	13%	9%	12%
Mother's Education				
<High School	27%	20%	27%	20%
High School	34%	43%	39%	43%
Some College	25%	23%	24%	22%
College Degree	6%	9%	6%	9%
Graduate Degree	7%	5%	4%	5%
Father's Education				
<High School	34%	24%	29%	24%
High School	24%	30%	37%	32%
Some College	22%	22%	22%	22%
College Degree	10%	12%	6%	12%
Graduate Degree	10%	11%	5%	11%

Table A-2

High School Programs of Upward Bound (UB) and Non-Upward Bound (NUB) Students

Programs/Courses	12th Graders All	UB	NUB	χ^2 [1]	10th Graders All	UB	NUB	χ^2 [1]
Academic H.S. Program	38%	39%	36%	1.14 (d.f.=2)	34%	37%	30%	5.76 (d.f.=2)
Courses Completed (Seniors)								
>3 years English/Literature	27%	34%	28%	2.99	N/A	N/A	N/A	
>3 years Mathematics	9%	15%	8%	10.08**	N/A	N/A	N/A	
>3 years History/Social Science	10%	13%	8%	7.08**	N/A	N/A	N/A	
>3 years Science	6%	9%	5%	6.47*	N/A	N/A	N/A	
Advanced Courses Taken								
Algebra I	79%	73%	77%	1.88	N/A	N/A	N/A	
Algebra II	52%	47%	43%	1.11	N/A	N/A	N/A	
Geometry	56%	49%	48%	0.08	N/A	N/A	N/A	
Trigonometry	26%	26%	19%	4.77*	N/A	N/A	N/A	
Calculus	9%	9%	7%	1.90	N/A	N/A	N/A	
Physics	21%	25%	20%	2.42	N/A	N/A	N/A	
Chemistry	39%	37%	33%	1.34	N/A	N/A	N/A	
Advanced Placement English	27%	34%	24%	9.45**	22%	29%	18%	9.89**
Advanced Placement Mathematics	23%	28%	20%	6.09*	24%	29%	21%	5.60*
Special Programs								
Cooperative Education	10%	29%	10%	57.35***	3%	17%	4%	28.26***
Work-Study	14%	36%	16%	53.41***	5%	20%	5%	44.64***
Talent Search	3%	39%	4%	182.37***	2%	24%	2%	89.26***
Continuation High School	1%	32%	2%	153.48***	1%	24%	2%	88.88***
Alternative High School	2%	29%	2%	130.74***	1%	20%	1%	84.68***
Program for Pregnant Girls	1%	27%	2%	115.21***	1%	19%	--	70.83***
CETA	10%	42%	15%	96.61***	6%	26%	10%	34.62***
JROTC	3%	27%	5%	84.94*** (d.f.=2)	3%	21%	4%	48.75*** (d.f.=2)
Courses Completed (Sophomores)								
>1 year English/Literature	N/A	N/A	N/A		31%	37%	35%	0.26
>1 year Mathematics	N/A	N/A	N/A		27%	36%	32%	1.18
>1 year History/Social Science	N/A	N/A	N/A		18%	25%	20%	1.89
>1 year Science	N/A	N/A	N/A		18%	21%	21%	0.01
Courses Planned (Sophomores)								
>2 years English/Literature	N/A	N/A	N/A		9%	13%	11%	0.61
>2 years Mathematics	N/A	N/A	N/A		6%	14%	7%	8.04**
>2 years History/Social Science	N/A	N/A	N/A		4%	6%	2%	6.14*
>2 years Science	N/A	N/A	N/A		5%	6%	3%	3.57

[1] *$p \leq .05$
**$p \leq .01$
***$p \leq .001$
d.f.=1 unless otherwise noted

Table A-3

Extracurricular Activities of Upward Bound (UB) and Non-Upward Bound (NUB) Students

Activity	12th Graders All	12th Graders UB	12th Graders NUB	12th Graders χ^2 [1]	10th Graders All	10th Graders UB	10th Graders NUB	10th Graders χ^2 [1]
School Activities								
Varsity Sports	35%	42%	34%	5.80*	N/A	N/A	N/A	
Honorary Clubs	17%	25%	13%	19.84***	N/A	N/A	N/A	
School Newspaper	20%	26%	21%	5.89	N/A	N/A	N/A	
Student Government	19%	29%	19%	11.77**	N/A	N/A	N/A	
Other Sports	41%	46%	40%	2.98	54%	64%	59%	1.42
Cheerleader, Pep Club	15%	20%	13%	7.56**	15%	22%	14%	6.17*
Debating, Drama	15%	25%	12%	24.50***	11%	18%	11%	4.70*
Band, Orchestra	15%	20%	13%	6.82**	16%	20%	19%	0.16
Chorus, Dance	21%	32%	22%	10.61**	23%	32%	25%	3.59
Hobby Clubs	23%	33%	22%	11.14***	22%	29%	25%	1.15
Subject Matter Clubs	24%	33%	23%	10.55**	26%	41%	24%	20.58***
Vocational Education Clubs	23%	26%	22%	1.59	14%	18%	14%	1.89
Community Youth Clubs	22%	31%	20%	13.70***	20%	28%	19%	6.07*
Church Activities	39%	45%	41%	1.47	38%	44%	35%	6.16*
Junior Achievement	6%	20%	11%	15.01***	6%	18%	9%	11.66***
Co-op Club	N/A	N/A	N/A	(d.f.=2)	2%	7%	3%	7.05** (d.f.=2)
Employment								
Ever Worked for Pay	95%	92%	93%	1.03	87%	87%	83%	1.87
Worked for Pay Last Week	62%	56%	61%	1.71	41%	45%	38%	3.35
Looked for Work Last Week	22%	26%	23%	1.44	25%	28%	27%	0.20
Worked for Pay Since School Started	73%	63%	66%	0.79	60%	54%	51%	0.80
Worked 15+ Hours/Week Most Recent Job	66%	62%	66%	1.58	33%	36%	30%	2.81
Cultural Experiences								
Taken Music Lessons	N/A	N/A	N/A		59%	53%	53%	0.01
Traveled Outside State	N/A	N/A	N/A		90%	84%	84%	0.01
Taken Dance Lessons	N/A	N/A	N/A		26%	30%	25%	1.83
Visited a Museum	N/A	N/A	N/A		89%	84%	87%	1.60
Taken Ability Test Out of School	N/A	N/A	N/A		25%	41%	22%	27.81***
Traveled Outside United States	N/A	N/A	N/A		38%	33%	34%	0.06
Been to Professional Ball Game	N/A	N/A	N/A		62%	60%	57%	0.47
Been to a Rock Concert	N/A	N/A	N/A		48%	51%	44%	2.74

[1]
*p $\leq$ .05
**p $\leq$ .01
***p $\leq$ .001
d.f. = 1 unless otherwise noted

Table A-4

Mean Academic Ability Scores of
Upward Bound (UB) and Non-Upward Bound (NUB) Students[1]

	10th Graders (N=)			12th Graders (N=446)		
	UB	NUB	t	UB	NUB	t
Academic Abilities						
Reading	46.30	47.44	1.53	45.64	46.14	0.72
Math I (easier items)	45.68	46.66	1.31	45.45	46.31	1.16
Math II (harder items)	46.64	47.76	1.56	47.93	47.12	-1.20
Reading--common items only	45.06	46.07	1.36	48.45	49.00	0.77
Math--common items only	44.69	45.43	1.01	47.31	47.89	0.52

[1] Academic ability test scores are standardized, with $\bar{X}$=50 and S.D.=10.

Note: Tests for 10th and 12th grade varied somewhat; scores for items common to both tests are reported separately.

Table A-5

High School Performance of Upward Bound (UB) and
Non-Upward Bound (NUB) Students

	12th Graders				10th Graders			
	All	UB	NUB	χ^2 [1]	All	UB	NUB	χ^2 [1]
Typical Grades So Far in High School								
Mostly As	11%	9%	9%		10%	6%	7%	
Half As/Half Bs	21%	18%	19%		18%	18%	15%	
Mostly Bs	20%	22%	18%		18%	18%	16%	
Half Bs/Half Cs	27%	28%	31%	9.93	27%	29%	29%	7.34
Mostly Cs	14%	14%	14%	(d.f.=7)	15%	17%	17%	
Half Cs/Half Ds	6%	7%	8%		10%	7%	12%	
Mostly Ds	1%	--	2%		2%	3%	2%	
Mostly below Ds	--	1%	--		1%	2%	1%	
Grades in English, Mathematics								
Mostly As/Bs in English	48%	46%	41%	2.01	43%	40%	39%	0.06
Mostly As/Bs in Mathematics	43%	42%	35%	4.53*	40%	35%	35%	
Factors Interfering with High School Education								
Courses Too Hard	49%	48%	52%	1.60	N/A	N/A	N/A	
Hard to Adjust to School	30%	30%	34%	1.74	N/A	N/A	N/A	
Poor Teaching	59%	59%	54%	2.74	N/A	N/A	N/A	
Poor Study Habits	70%	67%	66%	0.23	N/A	N/A	N/A	
Courses Too Easy	40%	46%	39%	3.39	N/A	N/A	N/A	
High School Graduation								
Expect Graduate June 1980	96%	93%	95%	2.07	N/A	N/A	N/A	
Expect Graduate High School	N/A	N/A	N/A		94%	93%	94%	0.56

[1]
*p $\leq$ .05
**p $\leq$ .01
***p $\leq$ .001
d.f. = 1 unless otherwise noted

Table A-6

Attitudes Toward School of Upward Bound (UB) and Non-Upward Bound (NUB) Students

	12th Graders				10th Graders			
	All	UB	NUB	χ^2 [1]	All	UB	NUB	χ^2 [1]
Attitudes Toward School in General								
Like Working Hard in School	54%	68%	60%	6.23*	55%	66%	62%	1.04
Satisfied with Education	68%	62%	66%	2.04	66%	64%	63%	0.03
Interested in School	75%	80%	77%	0.89	77%	82%	80%	0.24
Thinks Well of Students with Good Grades	N/A	N/A	N/A		42%	51%	49%	
Attitudes Toward English Courses								
Useful	61%	63%	61%	0.31	56%	57%	50%	3.67
Interesting	42%	37%	40%	.68	33%	34%	32%	0.17
At Ease in Class	N/A	N/A	N/A		76%	74%	80%	2.92
Feels Tense Doing Assignments	N/A	N/A	N/A		28%	24%	28%	0.94
Class Doesn't Scare	N/A	N/A	N/A		72%	72%	72%	0.00
Dreads Class	N/A	N/A	N/A		29%	26%	27%	0.01
Attitudes Toward Mathematics Courses								
Useful	62%	58%	65%	4.84*	60%	58%	55%	0.72
Interesting	43%	45%	42%	0.89	33%	35%	33%	0.53
At Ease in Class	N/A	N/A	N/A		69%	69%	68%	0.01
Feels Tense Doing Assignments	N/A	N/A	N/A		31%	34%	35%	0.00
Class Doesn't Scare	N/A	N/A	N/A		68%	66%	71%	1.86
Dreads Class	N/A	N/A	N/A		30%	29%	32%	1.05
School-Related Behavior								
Has Had Disciplinary Problems	14%	22%	17%	3.40	19%	24%	23%	0.06
Has Been Suspended/On Probation	13%	18%	13%	3.38	12%	16%	9%	7.76
Cuts Class Now and Then	43%	43%	49%	2.38	29%	33%	32%	0.21
Absent, Not Ill <5 Days in Fall	79%	78%	76%	0.42	83%	85%	81%	1.44
Late to School <5 Days in Fall	81%	78%	79%	0.10	86%	85%	82%	0.80
Spends 5+ Hours/Week on Homework	25%	29%	23%	4.13*	28%	31%	24%	4.40*
Seldom/Never Forgets Pencil/Paper	N/A	N/A	N/A		85%	80%	82%	0.59
Seldom/Never Forgets Books	N/A	N/A	N/A		91%	87%	90%	0.95
Seldom/Never Neglects Homework	N/A	N/A	N/A		78%	81%	79%	0.51

[1]
*$p \leq .05$
**$p \leq .01$
***$p \leq .001$
d.f. = 1 unless otherwise noted

Table A-7

Mean Self-Esteem and Work Orientation Scores
for Upward Bound (UB) and Non-Upward Bound (NUB) Students

	10th Graders (N=)			12th Graders (N=446)		
	UB	NUB	t[2]	UB	NUB	t
Self-Esteem[1]						
Self-Concept	0.03	-0.07	-1.41	-0.03	-0.07	-0.77
Locus of Control	-0.16	-0.14	0.04	-0.10	-0.17	-1.47
Work Orientation	-0.13	0.03	2.33*	-0.02	0.05	1.37

[1] Self-esteem scores represent the sum of items standardized to $\bar{X}=0$ and S.D.=1.

[2] $p \leq .05$

Table A-8

Life Quality and Job Satisfaction Values of
Upward Bound and Non-Upward Bound Students

	12th Graders				10th Graders			
	All	UB	NUB	χ^2 [1]	All	UB	NUB	χ^2 [1]
Important Aspects of Life								
Success in Work	88%	87%	89%	0.32	85%	82%	84%	0.42
Happy Family Life	81%	75%	82%	5.92*	83%	83%	82%	0.04
Having Lots of Money	32%	38%	38%	0.00	34%	39%	39%	0.00
Having Strong Friendships	80%	69%	74%	3.15	81%	67%	77%	6.83**
Finding Steady Work	84%	81%	84%	1.52	84%	84%	85%	0.26
Being a Leader in Community	10%	18%	10%	10.83***	11%	16%	14%	0.37
Having Better Opportunities for My Child	69%	77%	74%	0.57	73%	76%	79%	0.51
Correcting Inequalities	14%	23%	18%	2.56	15%	24%	18%	3.12
Important Aspects of Work								
Good Income in a Few Years	46%	53%	53%	0.00	N/A	N/A	N/A	
Job Security	58%	60%	63%	1.13	N/A	N/A	N/A	
Important/Interesting Work	85%	81%	82%	0.09	N/A	N/A	N/A	
Freedom to Make Decisions	62%	63%	62%	0.13	N/A	N/A	N/A	

[1] *$p \leq .05$
**$p \leq .01$
***$p \leq .001$

Table A-9

Educational Plans and Aspirations of Upward Bound (UB) and Non-Upward Bound (NUB) Students

	12th Graders				10th Graders			
	All	UB	NUB	χ^2 [1]	All	UB	NUB	χ^2 [1]
Expected Level of Education								
Below High School	--	1%	1%		2%	2%	1%	
High School	19%	15%	18%		24%	22%	27%	
Vocational School, <2 Years	8%	7%	7%		6%	6%	6%	
Vocational School, 2+ Years	11%	9%	13%		11%	11%	12%	
College, <2 Years	3%	4%	3%	16.42*	3%	3%	4%	13.01
College, 2-3 Years/AA Degree	12%	9%	11%	(d.f.=8)	12%	8%	13%	(d.f.=8)
College, BA/BS	25%	23%	26%		23%	22%	20%	
MA/MS, or Equivalent	11%	15%	9%		9%	10%	8%	
PhD or Equivalent	10%	16%	11%		10%	15%	8%	
Lowest Level of Schooling Satisfied With								
Below High School	1%	1%	2%		4%	5%	5%	
High School	33%	25%	32%		40%	36%	41%	
Vocational School, <2 Years	6%	8%	6%		5%	5%	3%	
Vocational School, 2+ Years	8%	8%	7%		8%	9%	10%	
College, <2 Years	5%	7%	6%	7.73	8%	8%	10%	8.06
College, 2-3 Years/AA Degree	16%	16%	16%	(d.f.=8)	14%	14%	14%	(d.f.=8)
College, BA/BS	21%	24%	21%		15%	13%	12%	
MA/MS, or Equivalent	5%	6%	5%		4%	6%	4%	
PhD, or Equivalent	3%	6%	5%		3%	5%	2%	
Plans Regarding College								
Attend College Ever	70%	80%	69%	12.35***	65%	76%	66%	6.81**
Attend College Next Year	60%	69%	58%	9.13**	50%	53%	50%	0.81
Applied to 1+ Colleges	62%	68%	60%	4.62*	N/A	N/A	N/A	
Accepted by 1+ Colleges	44%	42%	40%	0.26	N/A	N/A	N/A	
Expect Graduate from College	46%	54%	46%	5.29*	42%	48%	36%	8.48**
Believe Have Ability to Complete College	48%	54%	48%	3.09	37%	39%	35%	0.90
Disappointed if Don't Complete College	64%	75%	64%	12.07***	65%	69%	66%	0.69
Knows How to Choose High School Program for College	N/A	N/A	N/A		70%	78%	69%	6.05*
Knows How to Apply for College	N/A	N/A	N/A		22%	31%	25%	2.89
Retrospective Reports of Plans to Attend College								
6th Grade		N/A	N/A		42%	44%	38%	2.09
7th Grade		N/A	N/A		46%	48%	42%	1.83
8th Grade	49%	55%	45%	7.37**	54%	56%	52%	0.94
9th Grade	53%	57%	49%	4.83*	61%	64%	63%	0.06
10th Grade	58%	66%	56%	8.33**	N/A	N/A	N/A	
11th Grade	64%	73%	63%	9.24**	N/A	N/A	N/A	
Plans for Financial Aid								
Any Loans*	N/A	33%	22%	14.71***	N/A	N/A	N/A	
Any Scholarships/Grants	N/A	48%	39%	8.43**	N/A	N/A	N/A	
Any Work Program	N/A	33%	24%	8.43*	N/A	N/A	N/A	

(continued)

Table A-9
(continued)

	12th Graders				10th Graders			
	All	UB	NUB	χ^2 [1]	All	UB	NUB	χ^2 [1]
Expected Sources of Financial Aid								
NDSL Program	10%	20%	10%	10.86***	N/A	N/A	N/A	
FGSL Program	15%	27%	16%	10.31**	N/A	N/A	N/A	
Nursing Student Loan Program	3%	6%	3%	2.00	N/A	N/A	N/A	
State Student Loan Program	15%	27%	17%	5.37*	N/A	N/A	N/A	
College Student Loan Program	21%	33%	22%	9.13**	N/A	N/A	N/A	
Regular Bank Loan	16%	17%	17%	0.02	N/A	N/A	N/A	
BEOG	35%	56%	42%	11.48***	N/A	N/A	N/A	
SEOG	14%	34%	20%	12.93***	N/A	N/A	N/A	
ROTC Scholarship	3%	6%	4%	0.93	N/A	N/A	N/A	
Social Security Benefits for Children	9%	15%	15%	0.00	N/A	N/A	N/A	
Nursing Scholarship Program	3%	7%	3%	5.54*	N/A	N/A	N/A	
VA Survivors Benefits	3%	6%	5%	0.26	N/A	N/A	N/A	
VEAP	3%	5%	6%	0.37	N/A	N/A	N/A	
State Scholarship Program	21%	30%	27%	0.68	N/A	N/A	N/A	
College/University Program	29%	37%	30%	2.61	N/A	N/A	N/A	
Private Organization Scholarship	18%	22%	18%	0.97	N/A	N/A	N/A	
Vocational Rehabilitation Program	3%	6%	5%	0.15	N/A	N/A	N/A	
CETA	6%	15%	12%	1.28	N/A	N/A	N/A	
College Work-Study	28%	42%	34%	3.43	N/A	N/A	N/A	
Cooperative Education Program	8%	17%	12%	2.71	N/A	N/A	N/A	
Expected College Major								
Agriculture	3%	1%	1%		4%	5%	3%	
Art or Architecture	7%	10%	8%		9%	8%	8%	
Biological Science	2%	3%	2%		3%	3%	4%	
Business	22%	21%	30%		14%	11%	13%	
Communications	3%	5%	4%		3%	3%	3%	
Computer/Information Science	5%	6%	4%		5%	4%	6%	
Education	6%	5%	4%		4%	3%	4%	
Engineering	9%	7%	8%		8%	9%	9%	
English	2%	1%	—	19.67	2%	3%	4%	30.50
Foreign Language	1%	1%	1%	(d.f.=23)	1%	2%	1%	(d.f.=23)
Health Occupations	5%	5%	5%		5%	8%	6%	
Health Science	4%	4%	3%		4%	5%	3%	
Home Economics	2%	2%	1%		3%	3%	2%	
Mathematics	1%	1%	1%		2%	2%	2%	
Music	2%	—	2%		3%	4%	2%	
Philosophy or Religion	1%	—	—		—	1%	—	
Physical Science	2%	2%	1%		2%	2%	—	
Preprofessional	7%	8%	6%		6%	9%	3%	
Psychology or Social Science	7%	7%	7%		5%	5%	5%	
Vocational or Technical	6%	5%	6%		9%	4%	10%	

[1]
*p ≤ .05
**p ≤ .01
***p ≤ .001
d.f. = 1 unless otherwise noted

Table A-10

Post-High School Plans and Aspirations of Upward Bound (UB) and Non-Upward Bound (NUB) Students

	12th Graders				10th Graders			
	All	UB	NUB	χ^2 [1]	All	UB	NUB	χ^2 [1]
Main Activity Planned for Year Following High School								
Work Full Time	29%	24%	32%		29%	28%	27%	
OJT/Apprenticeship	2%	2%	4%		3%	2%	4%	
Military Service	4%	4%	5%		4%	4%	6%	
Homemaker	1%	1%	1%	13.45	1%	3%	2%	18.76*
Vocational-Technical School	6%	6%	6%	(d.f.=9)	6%	5%	7%	(d.f.=9)
2-Year College (Academic)	9%	9%	7%		6%	5%	8%	
2-Year College (Vocational)	6%	7%	6%		5%	4%	5%	
4-Year College	38%	42%	35%		37%	42%	31%	
Work Part Time	2%	2%	2%		3%	1%	4%	
Other Activities Planned for Year Following High School								
Work	68%	58%	63%	1.87	61%	51%	59%	5.30*
OJT/Apprenticeship	9%	10%	7%	1.76	7%	9%	6%	1.33
Military Service	5%	7%	8%	0.15	6%	11%	7%	2.18
Homemaker	7%	4%	6%	1.53	7%	9%	6%	2.08
Vocational-Technical School	12%	12%	12%	0.01	10%	10%	9%	0.15
2-Year College (Academic)	11%	11%	9%	0.62	7%	9%	9%	0.07
2-Year College (Vocational)	6%	6%	8%	1.79	5%	4%	2%	2.20
4-Year College	31%	38%	30%	5.79	30%	36%	28%	5.25*
Occupational Aspiration, Age 30								
Clerical	10%	9%	12%		10%	9%	8%	
Craftsperson	8%	7%	7%		9%	9%	11%	
Farming	2%	1%	1%		3%	2%	2%	
Homemaker Only	3%	2%	2%		5%	3%	2%	
Laborer	2%	2%	2%		2%	2%	2%	
Manager, Administrator	7%	7%	10%		4%	4%	5%	
Military	2%	3%	3%		3%	6%	6%	
Operative	3%	3%	2%	8.90	3%	3%	6%	17.19
Professional (BA/MA)	26%	27%	24%	(d.f.=16)	24%	23%	27%	(d.f.=16)
Professional (PhD)	13%	14%	13%		14%	16%	8%	
Proprietor or Owner	4%	3%	3%		4%	4%	3%	
Protective Service	2%	2%	1%		2%	2%	2%	
Sales	2%	2%	2%		2%	2%	2%	
School Teacher	4%	4%	3%		3%	2%	2%	
Service	3%	3%	3%		4%	3%	4%	
Technical	8%	8%	10%		7%	2%	1%	

[1]
*$p \leq .05$
**$p \leq .01$
***$p \leq .001$
d.f. = 1 unless otherwise noted

Table A-11

Parents' and Others' Influence on School Activities and Plans for Upward Bound (UB) and Non-Upward Bound (NUB) Students

	12th Graders				10th Graders			
	All	UB	NUB	χ^2 [1]	All	UB	NUB	χ^2 [1]
Others' Encouragement to Attend College								
Father	58%	53%	54%	0.07	56%	50%	51%	0.01
Mother	66%	69%	66%	0.90	65%	64%	57%	3.75
Counselor	51%	60%	49%	8.81**	29%	40%	28%	9.20**
Teachers	49%	58%	48%	8.40**	30%	41%	28%	11.86***
Friends, Relatives	52%	59%	47%	12.11***	40%	38%	40%	0.26
Characteristics of Closest Friend								
Gets Good Grades	86%	85%	86%	0.06	82%	84%	80%	2.34
Is Interested in School	69%	75%	72%	0.88	68%	75%	71%	1.30
Attends Class Regularly	90%	90%	87%	1.76	91%	85%	90%	3.75
Plans to Go to College	71%	76%	72%	1.82	66%	64%	67%	0.49
Others Consulted in Planning High School Program								
Father	N/A	N/A	N/A		23%	22%	21%	0.06
Mother	N/A	N/A	N/A		40%	47%	40%	2.87
Counselor	N/A	N/A	N/A		8%	14%	6%	10.73**
Teachers	N/A	N/A	N/A		4%	15%	5%	20.08***
Friends, Relatives	N/A	N/A	N/A		35%	44%	38%	2.13
Parental Interest in Schoolwork								
Mother Monitors Schoolwork	84%	82%	83%	2.48	87%	82%	86%	3.26
Father Monitors Schoolwork	67%	59%	56%	5.25 (d.f.=2)	70%	59%	64%	1.70 (d.f.=2)
Others Influencing Post-High School Plans								
Father	37%	35%	34%	0.05				
Mother	45%	53%	50%	0.75				
Counselor	12%	21%	15%	5.01*				
Teachers	15%	23%	17%	3.56				
Friends, Relatives	26%	31%	27%	2.42				
Military Recruiter	4%	7%	6%	0.55				

[1]
*$p \leq .05$
**$p \leq .01$
***$p \leq .001$
d.f. = 1 unless otherwise noted